



Meeting Notes

Project: **Washington State Drought Contingency Plan**

Subject: Task Force Meeting

Date: Wednesday, September 21, 2016

Location: Department of Ecology, Lacey, WA

Attendees: Jeff Marti, Ecology
Barb Anderson, Ecology
Morgan Mak, EMD
Jaclyn Hancock, Agriculture
John Schelling, Commerce
Karin Bumbaco, OWSC- UW

Jon Culp, WSCC
Gregory McKnight, DOH
Ginny Stern, DOH (phone)

Andrew Graham (Facilitator), HDR
Sarah Pistorese, HDR

Advisory Committee members (by phone):

Joan Kersnar, WWUC
Scott Revell, Roza Irrigation District
Tom Ring, Yakama Nation

Handouts

- Agenda
- Washington State Drought Contingency Plan Draft Outline
- Options for Drought Stages
- Mitigation & Response Actions
- Commerce write-up on power supply impacts from low runoff

Review Action Items from Last Meeting

- Greg McKnight, DOH, provided an update on options to gathering drought response information using DOH's Water Use Efficiency (WUE) reports. Greg said that DOH could add a voluntary question to the WUE reports to solicit input about activation of water utility shortage response plans. This will require management approval within the DOH Office of Drinking Water

Proposed Drought Stages

- Jeff Marti, Ecology, summarized possible drought stages for the Washington State Drought Contingency Plan (DCP) outlined in the *Options for Drought Stages* handout.
- The proposed stages incorporate the State drought criteria (i.e. forecasted water supply below 75 percent of normal and water shortage likely to create undue hardship). The water supply trigger for each stage would be based on seasonal climate forecasts. Water supply metrics derived from seasonal forecasts and historic records of impacts would serve as indicators of potential hardship.

- The drought stages could also include the level of certainty that drought conditions or hardships would occur. The level of certainty would probably increase with each stage.
- The Task Force provided the following input on the drought stage approach:
 - Karin Bumbaco, OWSC- UW, stated that the seasonal forecast level of certainty for metrics such as temperature and precipitation is rarely above approximately 60 percent. In addition, the level of certainty is not very precise. For example, there is not a big difference between 50 and 70 percent certainty. Karin recommended that if a level of certainty is applied, it should be for a wide range of possible values.
 - Karin recommended that the seasonal forecasts used be predominately from sources that are verified, such as the forecasts provided by the NOAA Climate Prediction Center.
 - Jeff noted that NOAA and NRCS do not provide water supply forecasts for all areas of the state.. For these regions, precipitation levels could be used as a proxy for water supply conditions.
 - Karin liked that the water supply triggers included at least two alternate indicators (e.g. seasonal runoff forecasts or experienced precipitation levels). The Task Force agreed with having “or” statements included in the triggers. This provides a more flexible approach, since the decision to enter a drought stage can consider multiple variables.
 - Ginny Stern, DOH, suggested that the triggers be phrased to give decision makers flexibility. For example, instead of giving a specific threshold, the trigger could be “likely to be less than x” percent of normal.
 - Ginny liked how the advisory stage involves communication to potentially affected areas. This approach allows the state to inform water users that they are interested in input so that water users expected to experience hardship can petition for a local drought declaration.
 - Ginny recommended that the State drought declaration come before the Emergency stage.
 - Karin suggested that the names of each stage differ from the Drought Monitor, to avoid confusion.
 - Jon Culp, WSCC, suggested that only the water supply trigger be used to enter a drought stage. The hardship criteria would be important to consider, but can be difficult to quantify.
- Andrew said that Ecology will be the agency that would declare the stages leading up to a declaration. He asked Jeff to comment on whether he has a strong preference on the number of stages we are considering.
- Jeff prefers that the DCP include only two stages: Advisory and Emergency. Drought in Washington can materialize rapidly. Therefore, state agencies need to be able to respond quickly. Moving between stages requires some administrative logistics, which could slow down the ability to mobilize response. Therefore, two stages would likely be the most efficient and realistic approach. The Advisory stage would involve initiating communications to raise awareness of drought risks and mobilizing resources. The

Emergency stage would involve implementing response measures. The following summarize the Task Force member's input on this approach:

- Jon likes with a two stage approach since staff resources are often limited.
- Greg suggested that the DCP include three stages. Greg preferred the triggers outlined under Option 2 (three stages) in the *Options for Drought Stages* handout. Jeff noted that the triggers would likely be reworked so that these triggers could be applied to two stages.
- Greg suggested that three stages could help to distinguish between areas of greater hardship. In addition, three stages would make it easier to communicate the level of response needed. For example, the larger municipal water utilities may not have water supply concerns. But the small communities neighboring these municipalities could be at risk of water shortages. If there were three stages, the large municipalities might be at Stage 1, the small communities may be at Stage 2. Stage 3 could be reserved for emergency conditions, for example, when water needed to be trucked to communities without sufficient supply.
- Karin suggested that there could be three stages. However, the first two stages would be most commonly used. The third stage would be reserved for extreme circumstances, such as multi-year droughts or when Federal aid is needed.
- Jaclyn Hancock, Agriculture, stated that the two stage approach is more streamlined and may be easier to implement. However, it may be useful to have a third stage for extreme circumstances.
- Joan Kersnar, Advisory Committee member from the Washington Water Utilities Council, preferred two stages since there is less potential for the public to confuse the State drought stages with local utility water shortage response plan stages. This provides lots of flexibility for utilities to communicate local water supply conditions to their customers.

Plan Development

Plan Outline

- Jeff reviewed the *Washington State Drought Contingency Plan Draft Outline* (handout). This handout provides an overview of the proposed sections and content of the DCP. The outline includes the elements required by the Reclamation WaterSmart Grant: drought monitoring, vulnerability assessment, mitigation and response actions, and operational and administrative framework. The outline also includes a communication element added by Ecology.
- Andrew requested that Task Force and Advisory Committee members send any comments on the outline to Jeff by October 5. He asked for them to address these questions:
 - Is anything missing that should be included?
 - Are the sections and subsections organized appropriately?
 - How long should the document be?
- Ginny Stern suggested the main document be short; and that detail be placed in appendices that can be revised periodically.



Drought Monitoring

Office of State Climatologist Activities

- Karin Bumbaco, OSC- UW, provided an update on the drought monitoring task. The drought monitoring panel has been established. The panel includes 14 members who are specialists in drought monitoring tools and practices. Karin will send Jeff the names, areas of expertise, and contact information for all of the panel members.
- Karin has identified 14 forecasting tools and will evaluate which ones would be most useful for Washington State. On October 6, the panel will hold its first conference call. Based on the panel's input, Karin will prepare the drought monitoring section. The panel will review this in December. Karin will send Jeff a summary of the schedule for the drought monitoring work.
- The drought monitoring section will include a review of drought indices, seasonal climate forecasting, and streamflow forecasting methods.

Vulnerability Assessment

- Ecology Activities: Jeff has started the vulnerability assessment chapter. Jeff aims to have the draft chapter completed by the next Task Force meeting on October 19.
- Agriculture Activities: Agriculture aims to complete the 2015 Drought Impact Assessment by the end of 2016. The assessment will include several focus areas, including impacts to the Wapato Irrigation Project, Skagit County, and the cattle and dairy industry. The Washington Academy of Sciences will review the final report this winter.
- Health Activities:
 - Greg provided a summary of the 2015 drought impacts. For example, due to increased temperatures and drought conditions in 2015, there was an increase in food borne illnesses, west Nile virus, and recreational water injuries. Although the DCP may not include response measures associated with health risks, the DCP should acknowledge health risks that can be exacerbated by drought. The DCP could direct readers to the DOH for more information on how to mitigate and respond to these health risks. Greg will prepare a paragraph on this that can be inserted into the DCP.
 - Ginny provided a summary of the DOH Vulnerability/Susceptibility Assessment tool. The tool can identify water systems that may be susceptible to drought. Ginny noted that the tool estimates a water system's vulnerability based on susceptibility and exposure. The tool considers factors such as location, source type, water rights, infrastructure type/age, and system capacity, among others. Ginny noted that it is not a predictive tool. Instead, it is intended to support planning for systems that may be at risk. DOH plans to add system vulnerability ratings to DOH's Sentry database. DOH also plans to expand the tool to incorporate susceptibilities due to climate change and to include a mapping component. Ginny suggested that DOH's tool could be used to support outreach to vulnerable systems during the first stage of drought. Some of this may also be loaded into the DOH Sentry database.



- Jeff will send Ginny the framework for the vulnerability assessment section. Based on this, Ginny will prepare a summary of the DOH tool for inclusion in the DCP.
- Commerce Activities: John Schelling, Commerce, provided a handout summarizing drought impacts on the power industry. John requested that Task Force members send him any comments on the summary.

Mitigation and Response Actions

- Jeff summarized the *Mitigation and Response Actions* handout. This handout summarizes the existing and potential mitigation and response actions for Washington State. Meeting participants provided the following input on this handout:
 - On the whole, the group finds this handout to be a useful breakdown of actions. We should acknowledge that some types of actions are not readily divided into mitigation and response, but are more of a continuum between these categories.
 - Andrew Graham, meeting facilitator from HDR Inc., suggested that the state government actions be separated from the local entity actions. The state specific actions would be included in the DCP.
 - Jeff requested that Task Force and Advisory Committee members send him comments on the Mitigation and Response handout. Members should consider which actions should be included in the DCP and how they should be organized.
- Jeff suggested that the DCP could examine alternative drought funding mechanisms and provide a recommendation. For example, funding could be distributed by individual state agencies, instead of funneled through Ecology.
- Jeff said that currently, funding is predominately allocated during periods of drought. Therefore, it is mostly directed to response measures. Often funding is not approved for projects that would extend beyond the drought period. This limits the opportunities to implement long-term solutions. It may be useful to introduce an annual grant opportunity to encourage implementation of drought mitigation measures. Water users may be able to make more progress on mitigation measures if funding were more predictable and offered in non-drought years.
- Greg noted that there are multiple emergency grant opportunities that become available during periods of drought. However, there are very few funding opportunities available during non-drought years. Therefore it would be valuable if the DCP provided a recommendation for annual or reoccurring drought mitigation funding opportunities.
- Greg suggested that drought funding could be coordinated with other state efforts, such as the EMD Natural Hazard Mitigation Group.

Upcoming Stakeholder Meetings

- On September 19, Jeff met with the Fisheries Commission. The Commission was very interested in the DCP effort and provided input on options for further outreach to tribes..
- Jeff is working with DOH to set up a teleconference with stakeholders from small water systems. This meeting will likely be in October.



Next Steps

- NIDIS will be hosting a workshop in September focused on the northwestern states. Jeff plans to attend this workshop and will report back to the Task Force.
- The Task Force agreed to reschedule the November Task Force meeting. The meeting will now be November 9th, 9:30 -12:00.

Action Items

Who	What	By When
Greg M/Jeff M	Schedule call with small water system stakeholders	Sept 30
All	Send Jeff any comments on the WDCP Outline handout (consider: missing content, organization of content, additional details to expand outline, total page count for plan)	Oct 5
All	Send Jeff any comments on the Mitigation & Response handout	Oct 5
Jeff M	Distribute framework for the DCP Chapters to support Task Force members' development of subsections.	Oct 5
All	Send John S any comments on the Energy section write-up	Oct 5
John S	Update the energy section based on Task Force comments and send to Jeff.	Oct 14
Karin B	Send Jeff the contacts for the drought monitoring panel members. Send Jeff the Drought Monitoring section schedule.	Oct 14
Greg M	Send Jeff paragraph on drought-related health risks.	Oct 14
Ginny S	After receiving the framework for writing sections, send Jeff section on DOH Susceptibility tool and drought-related applications.	Oct 14
Jeff M	Prepare Draft Vulnerability Assessment Chapter.	Oct 19
Jeff Marti	Follow up with Melissa Downs on summary of the Lake Roosevelt Drought Insurance program for inclusion in the DCP.	Oct 19
Teresa Scott	Send Jeff the WDFW potential vulnerabilities mapping information. Identify hatcheries that may be vulnerable during droughts.	In progress
Jeff Marti	Set up a meeting with the large water utilities in fall 2017 to learn more about their system operations and monitoring/forecasting tools.	In progress
Jeff Marti	Arrange a meeting with tribal stakeholders.	In progress
Jeff Marti	Solicit input from Trout Unlimited and the water trusts.	In progress